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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/813,279B

DATE: 11/29/2002
TIME: 16:31:57

Input Set : A:\09-813,279 Sequence Listing.txt
Output Set: N:\CRF4\11292002\I813279B.raw

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   3  <110> APPLICANT: Wood, Keith
   4        Hannah, Rita
   5        Moravec, Richard A
   7  <120> TITLE OF INVENTION: IMPROVED METHOD FOR DETECTION OF ATP
   9  <130> FILE REFERENCE: 10743/6
  11  <140> CURRENT APPLICATION NUMBER: US 09/813,279B
C--> 12  <141> CURRENT FILING DATE: 2002-11-13
  14  <150> PRIOR APPLICATION NUMBER: US60/269,526
  15  <151> PRIOR FILING DATE: 2001-02-16
  17  <160> NUMBER OF SEQ ID NOS: 8
  19  <170> SOFTWARE: PatentIn version 3.1
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  22  <211> LENGTH: 544
  23  <212> TYPE: PRT
  24  <213> ORGANISM: Artificial Sequence
  26  <220> FEATURE:
  27  <223> OTHER INFORMATION: Mutant of LucPpe2 luciferase
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  35  Ala Asp Gly Thr Ala Gly Glu Gln Met Phe Asp Ala Leu Ser Arg Tyr
  36               20                  25                  30
  39  Ala Asp Ile Ser Gly Cys Ile Ala Leu Thr Asn Ala His Thr Lys Glu
  40           35                  40                  45
  43  Asn Val Leu Tyr Glu Glu Phe Leu Lys Leu Ser Cys Arg Leu Ala Glu
  44       50                  55                  60
  47  Ser Phe Lys Lys Tyr Gly Leu Lys Gln Asn Asp Thr Ile Ala Val Cys
  48   65                  70                  75                  80
  51  Ser Glu Asn Gly Leu Gln Phe Phe Leu Pro Val Ile Ala Ser Leu Tyr
  52               85                  90                  95
  55  Leu Gly Ile Ile Ala Ala Pro Val Ser Asp Lys Tyr Ile Glu Arg Glu
  56              100                 105                 110
  59  Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Ile Phe Cys Ser
  60              115                 120                 125
  63  Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
  64          130                 135                 140
  67  Val Glu Thr Ile Ile Ile Leu Asp Leu Asn Glu Asp Leu Gly Gly Tyr
  68  145                 150                 155                 160
  71  Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
  72              165                 170                 175
  75  Val Lys Lys Phe Lys Pro Tyr Ser Phe Asn Arg Asp Asp Gln Val Ala
  76          180                 185                 190
  79  Leu Val Met Phe Ser Ser Gly Thr Thr Gly Val Pro Lys Gly Val Met
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

A:\09-813,279 Sequence Listing.txt

N:\CRF4\11292002\I813279B.raw

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85  Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Leu Ala Lys Arg Pro
83      210              215              220
87  Thr Ile Gly Asn Ala Ile Asn Pro Thr Thr Ala Ile Leu Thr Val Leu
88  225              230              235              240
91  Pro Phe His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
92              245              250              255
95  Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
96      260              265              270
99  Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
100     275              280              285
103 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
104     290              295              300
107 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
108 305              310              315              320
111 Glu Ile Gly Glu Met Val Lys Lys Arg Phe Lys Leu Asn Phe Val Arg
112             325              330              335
115 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Pro
116             340              345              350
119 Lys Gly Asp Ala Arg Pro Gly Ser Thr Gly Lys Ile Val Pro Phe His
120     355              360              365
1.. Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
1.. 370              375              380
1.. Glu Pro Gly Glu Leu Tyr Phe Lys Gly Ala Met Ile Met Lys Gly Tyr
1.. 385              390              395              400
1.. Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
1.. 405              410              415
1.. Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Phe Tyr
1.. 420              425              430
1.. Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
1.. 435              440              445
1.. Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
1.. 450              455              460
1.. Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
1.. 465              470              475              480
1.. Ala Ala Gly Val Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
1.. 485              490              495
1.. Val Gln Asp Phe Val Ser Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
1.. 500              505              510
1.. Gly Gly Val Lys Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
1.. 515              520              525
1.. Ile Asp Arg Lys Val Leu Arg Gln Met Phe Glu Lys His Thr Asn Gly
1.. 530              535              540
167 <210> SEQ ID NO: 2
168 <211> LENGTH: 544
169 <212> TYPE: PRT
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Mutant of LucPpe2 luciferase
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RAW SEQUENCE LISTING

PATENT APPLICATION N: US/09/813,279B   DATE: ...

TIME: ...

Input file : A:\09-813,279 Sequence Listing.txt
Output file : N:\CRF4\11292002\I813279B.raw

SEQUENCE:

177 Met Ala Asp Lys Asn Ile Leu Tyr Gly Pro ... Ile Phe Tyr Pro Leu
178 1   15

181 Glu Arg Gly Thr Ala Gly Glu Gln Met Ile Asp Ala Leu Ser Arg Tyr
182   25   30

185 Ala Arg Ile Pro Gly Cys Ile Ala Ile Thr Asn Ala His Thr Lys Glu
186   35   40   45

189 Asn Val Leu Tyr Glu Glu Phe Leu Tyr Leu Ser Cys Arg Leu Ala Glu
190   50   55   60

193 Ser Phe Lys Lys Tyr Gly Leu Lys Gln Asn Asp Thr Ile Ala Val Cys
194 65   70   75   80

197 Ser Glu Asn Gly Leu Gln Phe Phe Leu Ile Val Ile Ala Ser Leu Tyr
198   85   90   95

201 Leu Gly Ile Ile Val Ala Pro Val Asn Asp Lys Tyr Ile Glu Arg Glu
202   100   105   110

205 Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Val Phe Cys Ser
206   115   120   125

209 Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
210   130   135   140

213 Ile Glu Thr Ile Ile Ile Leu Asp Leu Asn Glu Asp Leu Gly Gly Tyr
214 145   150   155   160

217 Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
218   165   170   175

221 Val Lys Lys Phe Lys Pro Tyr Ser Phe Asn Arg Asp Asp Gln Val Ala
222   180   185   190

225 Leu Ile Met Phe Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val Met
226   195   200   205

229 Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Leu Ala Lys Asp Pro
230   210   215   220

233 Thr Phe Gly Asn Ala Ile Asn Pro Thr Thr Ala Ile Leu Thr Val Ile
234 225   230   235   240

237 Pro Phe His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
238   245   250   255

241 Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
242   260   265   270

245 Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
246   275   280   285

249 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
250   290   295   300

253 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
254 305   310   315   320

257 Glu Ile Gly Glu Met Val Lys Lys Arg Phe Lys Leu Asn Phe Val Arg
258   325   330   335

261 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Pro
262   340   345   350

265 Lys Gly Asp Ala Lys Pro Gly Ser Thr Gly Lys Ile Val Pro Phe His
266   355   360   365

269 Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
270   370   375   380

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE:

TIME:

INPUT FILE: A:\09-813,279 Sequence Listing.txt

OUTPUT FILE: N:\CRF4\11292002\I813279B.raw

Ala Pro Gly Glu Leu Tyr Phe Lys Gly Pro Met Ile Met Lys Gly Tyr
374 380 385 390

Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
278 400 410 415

Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Phe Tyr
282 420 425 430

Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
386 435 440 445

Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
390 450 455 460

Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
394 465 470 475 480

Ala Ala Gly Val Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
398 485 490 495

Val Gln Asp Tyr Val Ala Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
402 500 505 510

Gly Gly Val Lys Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
406 515 520 525

Ile Asp Arg Lys Val Leu Arg Gln Met Phe Glu Lys His Thr Asn Gly
410 530 535 540

413 <210> SEQ ID NO: 3
414 <211> LENGTH: 544
415 <212> TYPE: PRT
416 <213> ORGANISM: Artificial Sequence
418 <220> FEATURE:
419 <223> OTHER INFORMATION: Mutant of LucPpe2 luciferase
421 <400> SEQUENCE: 3

Met Ala Asp Lys Asn Ile Leu Tyr Gly Pro Glu Pro Phe Tyr Pro Leu
324 1 5 10 15

Glu Asp Gly Thr Ala Gly Glu Gln Met Phe Asp Ala Leu Ser Arg Tyr
20 25 30

Ala Asp Ile Pro Gly Cys Ile Ala Leu Thr Asn Ala His Thr Lys Glu
331 35 40 45

Asn Val Leu Tyr Glu Glu Phe Leu Lys Leu Ser Cys Arg Leu Ala Glu
336 50 55 60

Ser Phe Lys Lys Tyr Gly Leu Lys Gln Asn Asp Thr Ile Ala Val Cys
340 65 70 75 80

Ser Glu Asn Ser Leu Gln Phe Phe Leu Pro Val Ile Ala Ser Leu Tyr
344 85 90 95

Leu Gly Ile Ile Val Ala Pro Val Asn Asp Lys Tyr Ile Glu Arg Glu
348 100 105 110

Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Val Phe Cys Ser
352 115 120 125

Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
356 130 135 140

Ile Glu Thr Ile Ile Ile Leu Asp Leu Asn Asp Asp Leu Gly Gly Tyr
360 145 150 155 160

Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
364 165 170 175

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE: ...
TIME: ...

Input Set : A:\09-813,279 Sequence Listing.txt
Output Set : N:\CRF4\11292002\I813279B.raw

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        Leu Tyr Lys Ile Lys Pro Tyr Ser Ile Asn Arg Asp Asp Gln Val Ala
                        180                     185                     190
        Leu Ile Met Phe Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val Met
        182             195                     200                     205
        Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Ile Ala Tyr Arg Pro
        176             210                     215                     220
    79  Thr Phe Gly Asn Ala Ile Asn Pro Thr Ser Ala Ile Leu Thr Val Ile
    180 225                     230                     235                     240
    183 Pro Ile His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
    184                 245                     250                     295
    187 Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
    188                 260                     265                     270
    191 Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
    192             275                     280                     285
    195 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
    196         290                     295                     300
    199 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
    200 305                     310                     315                     320
    203 Glu Ile Gly Glu Met Val Lys Lys Arg Phe Lys Leu Asn Phe Val Arg
    204                 325                     330                     335
    207 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Pro
    208             340                     345                     350
    211 Lys Gly Asp Ala Lys Pro Gly Ser Thr Gly Lys Ile Val Pro Phe His
    212         355                     360                     365
    215 Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
    216         370                     375                     380
    219 Glu Pro Gly Glu Leu Tyr Phe Lys Gly Pro Met Ile Met Lys Gly Tyr
    220 385                     390                     395                     400
    223 Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
    224                 405                     410                     415
    227 Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Phe Tyr
    228             420                     425                     430
    231 Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
    232         435                     440                     445
    235 Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
    236     450                     455                     460
    239 Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
    240 465                     470                     475                     480
    243 Ala Ala Gly Val Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
    244                 485                     490                     495
    247 Val Gln Asp Tyr Val Ala Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
    248             500                     505                     510
    251 Gly Gly Val Ile Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
    252         515                     520                     525
    255 Ile Asp Arg Lys Val Leu Arg Gln Met Leu Glu Lys His Thr Asn Gly
    256     530                     535                     540
    459 <210> SEQ ID NO: 4
    460 <211> LENGTH: 544
    461 <212> TYPE: PRT
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VERIFICATION SUMMARY

PATENT APPLICATION N: US/09/813,279B

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